

Claims

What is claimed is:

5           1.       A method performed by an information handling system in processing a loop of instructions, comprising:

              in response to detecting processing of a particular instruction during a pass through the loop, initiating a fetch of an initial instruction that is programmed at a start of the loop, and storing an identification of a different instruction that is programmed between the initial

10       instruction and the particular instruction; and

              according to the stored identification, in response to detecting processing of the different instruction during an additional pass through the loop, initiating an additional fetch of the initial instruction.

15           2.       The method of Claim 1, wherein initiating the fetch comprises:

              in response to detecting processing of the particular instruction during the pass through the loop, initiating the fetch before processing a final instruction during the additional pass, wherein the final instruction is programmed at an end of the loop.

20           3.       The method of Claim 1, wherein initiating the additional fetch comprises:

              in response to detecting processing of the different instruction during the additional pass through the loop, initiating the additional fetch before processing a final instruction during the additional pass, wherein the final instruction is programmed at an end of the loop.

25           4.       The method of Claim 1, wherein the particular instruction is an instruction that includes an end-of-loop alert associated with the loop.

              5.       The method of Claim 1, wherein the particular instruction is an instruction at which an end-of-loop mark is located in association with the loop.

6. The method of Claim 1, wherein the loop is a first loop, and wherein the information handling system processes multiple loops of instructions including the first loop and a second loop, and wherein initiating the fetch comprises:

in response to detecting processing of the particular instruction during the pass through the loop, initiating the fetch if the first loop is an innermost nested loop that contains the particular instruction and is scheduled to be repeated in the additional pass before processing an instruction outside the first loop.

7. The method of Claim 6, wherein initiating the additional fetch comprises:

in response to detecting processing of the different instruction during the additional pass through the loop, initiating the additional fetch if the first loop is an innermost nested loop that contains the different instruction and is scheduled to be repeated in yet another pass before processing an instruction outside the first loop.

8. The method of Claim 7, wherein the particular instruction is a first particular instruction, the initial instruction is a first initial instruction, the different instruction is a first different instruction, and the stored identification is a first stored identification, and comprising:

in response to detecting processing of a second particular instruction during a pass through the second loop, initiating a fetch of a second initial instruction that is programmed at a start of the second loop, and storing a second identification of a second different instruction that is programmed between the second initial instruction and the second particular instruction; and

according to the second stored identification, in response to detecting processing of the second different instruction during an additional pass through the second loop, initiating an additional fetch of the second initial instruction.

9. The method of Claim 8, wherein initiating the fetch of the second initial instruction comprises:

in response to detecting processing of the second particular instruction during the pass through the second loop, initiating the fetch if the second loop is an innermost nested loop that contains the second particular instruction and is scheduled to be repeated in the additional pass before processing an instruction outside the second loop.

10. The method of Claim 9, wherein initiating the additional fetch of the second initial instruction comprises:

in response to detecting processing of the second different instruction during the additional pass through the second loop, initiating the additional fetch if the second loop is an innermost nested loop that contains the second different instruction and is scheduled to be repeated in yet another pass before processing an instruction outside the second loop.

11. A system for processing a loop of instructions, comprising:  
circuitry for:

in response to detecting processing of a particular instruction during a pass through the loop, initiating a fetch of an initial instruction that is programmed at a start of the loop, and storing an identification of a different instruction that is programmed between the initial instruction and the particular instruction; and  
according to the stored identification, in response to detecting processing of the different instruction during an additional pass through the loop, initiating an additional fetch of the initial instruction.

12. The system of Claim 11, wherein the circuitry is for:

in response to detecting processing of the particular instruction during the pass through the loop, initiating the fetch before processing a final instruction during the additional pass, wherein the final instruction is programmed at an end of the loop.

13. The system of Claim 11, wherein the circuitry is for:

in response to detecting processing of the different instruction during the additional pass through the loop, initiating the additional fetch before processing a final instruction during the additional pass, wherein the final instruction is programmed at an end of the loop.

14. The system of Claim 11, wherein the particular instruction is an instruction that includes an end-of-loop alert associated with the loop.

15. The system of Claim 11, wherein the particular instruction is an instruction at which an end-of-loop mark is located in association with the loop.

5           16. The system of Claim 11, wherein the loop is a first loop, and wherein the system processes multiple loops of instructions including the first loop and a second loop, and wherein the circuitry is for:

          in response to detecting processing of the particular instruction during the pass through the loop, initiating the fetch if the first loop is an innermost nested loop that contains the  
10   particular instruction and is scheduled to be repeated in the additional pass before processing an instruction outside the first loop.

17. The system of Claim 16, wherein the circuitry is for:

          in response to detecting processing of the different instruction during the additional pass  
15   through the loop, initiating the additional fetch if the first loop is an innermost nested loop that contains the different instruction and is scheduled to be repeated in yet another pass before processing an instruction outside the first loop.

18. The system of Claim 17, wherein the particular instruction is a first particular  
20   instruction, the initial instruction is a first initial instruction, the different instruction is a first different instruction, and the stored identification is a first stored identification, and wherein the circuitry is for:

          in response to detecting processing of a second particular instruction during a pass through the second loop, initiating a fetch of a second initial instruction that is programmed at a  
25   start of the second loop, and storing a second identification of a second different instruction that is programmed between the second initial instruction and the second particular instruction; and

          according to the second stored identification, in response to detecting processing of the second different instruction during an additional pass through the second loop, initiating an additional fetch of the second initial instruction.

19. The system of Claim 18, wherein the circuitry is for:

in response to detecting processing of the second particular instruction during the pass through the second loop, initiating the fetch of the second initial instruction if the second loop is an innermost nested loop that contains the second particular instruction and is scheduled to be repeated in the additional pass before processing an instruction outside the second loop.

20. The system of Claim 19, wherein the circuitry is for:

in response to detecting processing of the second different instruction during the additional pass through the second loop, initiating the additional fetch of the second initial instruction if the second loop is an innermost nested loop that contains the second different instruction and is scheduled to be repeated in yet another pass before processing an instruction outside the second loop.